

CLAIMS:

1. A compressible polyurethane layer having outer and inner surfaces on or for rotation-symmetrical bodies, characterized in that said polyurethane layer contains expanded and/or non-expanded but expandable thermoplastic hollow spheres.
2. The polyurethane layer according to claim 1, characterized in that said hollow spheres consist of an acrylate/vinylidene fluoride copolymer.
3. The polyurethane layer according to claim 1 or 2, characterized by having a thin layer of polyurethane towards the outer surface which contains non-expanded or no hollow spheres.
4. The polyurethane layer according to any of claims 1 to 3, characterized in that said expanded hollow spheres have diameters of from 20 to 100  $\mu\text{m}$ , preferably from 30 to 50  $\mu\text{m}$ .
5. The polyurethane layer according to claim 3 or 4, characterized in that said non-expanded hollow spheres have diameters of from 6 to 16  $\mu\text{m}$ , preferably from 6 to 9  $\mu\text{m}$ .
6. The polyurethane layer according to any of claims 1 to 5, characterized in that the inner surface of the polyurethane layer is in contact with a carrier made of metal or plastic.
7. A method for the preparation of a compressible polyurethane layer having outer and inner surfaces on or for rotation-symmetrical bodies according to claims 1 to 6, characterized in that a freshly prepared mixture of diisocyanate and polyol or polyamine is applied by rotational casting to a roller-shaped carrier, one or both of the two components containing said

expanded and optionally the non-expanded hollow spheres, followed, if desired, by withdrawing the polyurethane layer from the carrier and, if desired, by cutting it open.